Understanding Your Vascular Access Device

Your guide to vascular access based on the Vessel Health and Preservation model
Vessel Health and Preservation is a set of rules we use to keep you and your veins healthy when you have a vascular access device.

This model is designed to help your Health Care Professionals and you in preventing any complications with yourself, your veins and your device.

TABLE OF CONTENTS

Vascular Access
What is vascular access?
Why is it important for me to know about vascular access?
What is the right line for me?
The right patient
The right time
What are the different types of vascular access devices or lines?

Vessel Health and Preservation
Inserting the vascular access device
Looking at the vascular access device every day
What you can do to help
What problems can happen with my vascular access device?
What are we doing at NBT to prevent infections
Taking care of your line at home
What is vascular access?

You may be told that you need to have a flexible, hollow tube inserted into a vein for diagnostic or therapeutic reasons, such as administration of medicines, fluids, blood sampling, central venous pressure monitoring, Parenteral Nutrition (PN) or blood transfusions directly into you bloodstream. The tube can be called a line, catheter or vascular access device.

Why is it important for me to know about vascular access?

There are many types of vascular access device. With your involvement the Healthcare Professionals looking after you will decide what type of line you get. It is important to choose the Right Line, for the Right Patient (You), at the Right Time.

There are two types of device:

**Peripheral lines:** Are placed into your veins in your hand or arm.

**Central lines:** Are placed into a large vein of your arm, neck, chest or groin and end in a larger vein near your heart.

The type of vascular access device that is best for you is one that will allow you to get your treatment put into your bloodstream safely. Some medicines and solutions can cause damage to small veins because of their strength. These medicines and solutions need to be given into a large vein to stop this from happening. By placing into a large vein with a very fast blood flow, medicines and solutions mix quickly with your blood. This prevents damage to your veins like those in your hand and arm.
The right patient (You)

It is important that you get the right vascular access device. The Health Care Professionals looking after you will consider the following:

- How long will you need to have the vascular access device?
- What do you need it for?
- Do you have any other requirements for a vascular access device such as blood tests or measuring blood flow?
- The types of treatment you need and it is gentle or harsh on your veins?
- Will the reason you are getting a vascular access device increase your chances of having any vascular access problems?
- Your previous medical history relating to you vascular access?
- Do you have healthy skin and veins?
- Do you have other health problems?

The right time

The right time means to make sure that you get the vascular access device that is best for you as soon as you need it. You may get a vascular access device as soon as your care begins that will take care of all of your needs. Sometimes, the first type of vascular access device is changed to a different type depending on your condition and your need to have other kinds of medications or treatments.
What are the different types of vascular access devices

Peripheral IV Catheter

- This type of catheter may be called an IV, Cannula, Venflon or Drip. They are very short and are inserted into the small veins in your hand and arm – up to the bend in the arm.
- Peripheral catheters are best used when vascular access is only needed for up to 10 days.
- Peripheral catheters are only used for medicines and solutions that do not damage the veins.

Midline Catheter

- A Midline catheter is no longer than 20cm and is placed in a vein in the arm.
- Midline catheters are used for up to 29 days. Like a Peripheral catheter, they are only used to give medicines and solutions that do not damage the vein.

PICC (Peripherally Inserted Central Catheter)

- PICCs are very long catheters placed into a medium-sized vein above the bend in your arm. The tip of the catheter ends in the large vein near your heart.
- A PICC may be used for many days, months, and sometimes up to a year or more.
- The PICC is a kind of central venous catheter meaning that it may be used for all types of treatments.
- Since blood flows very fast in your large vein leading to your heart, medicines and solutions can mix quickly with the blood. This prevents damage that may be caused by some treatments when they are given into a small vein.
The PICC can also be used to take samples of blood for blood tests.

**Central Venous Catheter (CVC)**

- A CVC is a long catheter placed into a large vein of your neck, chest, or groin and ends in the large vein near your heart. It may be called by many names such as CVC, Quinn or Central Line.
- A CVC can be used for up to 29 days.
- Since blood flows very fast in your large vein leading to your heart, medicines and solutions can mix quickly with the blood. This prevents damage that may be caused by some treatments when they are given into a small vein like those in the hand or arm.

**Tunneled Central Venous Catheter CVC**

- A tunneled line is a long catheter that is inserted into your neck, chest or groin and ends in a large vein near your heart. Part of the catheter is then placed (tunneled) under your skin.
- A tunneled CVC can be used for weeks to years.
- Since blood flows very fast in your large vein leading to your heart, medicines and solutions can mix quickly with the blood. This prevents damage that may be caused by some treatments when they are given into a small vein like those in the hand or arm.

**Implanted Port**

- An Implanted Port is also known as Portacath, Ports or TIVAD (Total Implanted Vascular Access Device)
- An implanted port is a small medical device that is placed
beneath the skin. It is made of two parts:

1. A long catheter. The catheter is tunnelled under the skin and ends in a large vein near your heart.

2. A metal/plastic port or disc (2.5-4cm in diameter), which is inserted in the chest and attached to the catheter.

   - To use the port to give medicines or solutions into your bloodstream, a special small needle is put into the port through your skin. Once the medication is given or the blood sample is taken the fine needle may be removed.

   - Since blood flows very fast in your large vein leading to your heart, medicines and solutions can mix quickly with the blood. This prevents damage that may be caused by some treatments when they are given into a small vein like those in the hand or arm.

Vessel Health and Preservation

Rules to keep you & your veins healthy

The Right Line, The Right Patient, The Right Time™

Vessel Health and Preservation is a set of rules designed to keep your veins healthy when you have a vascular access device. The Vessel Health and Preservation Framework guides your Health Care Professional looking after you in making the right decision about the right line for you. You are an important part of this and will help make the decision on the right line for you.
Inserting the Vascular Access Device

- The Health Care Professional inserting the vascular access device will be very careful to prevent germs from getting on or into your vascular access device when it is put in – this is called aseptic technique.

- If you are getting a central line it will be inserted with the use of an ultrasound. Ultrasound is a painless way to see your vein from the outside of your body. A small, hand-held probe is placed on top of your skin. The probe sends the picture of your vein to a screen. This will identify exactly where your vein is and where to place your vascular access device.

Before the device is placed, you’ll be told about the kind of vascular access device that’s been decided upon, why you need it, how it will be put in, the intended benefits and any risks. You will be asked if you have any questions, your consent will be gained and you will be asked if you are sure you want the vascular access device.

Looking at the vascular access device every day

The Health Care Professionals looking after you will make sure that your vascular access device is taken out as soon as you no longer need.

Each day you vascular access device will be assessed carefully to:

- Make sure you have no problems
- See if it is working the way it should be
- Examine your skin where it is inserted
- Make sure your vein remains healthy
What you can do to help

Please inform us if you think there is a problem with your vascular access device:

- If you feel pain where the vascular access device exits the skin (this is called the site) or it just feels uncomfortable
- If you see or feel anything leaking from the site
- If the dressing (the covering that keep the site protected from germs) is loose, wet, or becomes dirty

Important rules to know to prevent Infection

- Ask the members of your healthcare team to explain why you need the catheter and how long you will have it.
- Ask if you still need to have the vascular access device
- Make sure that all healthcare team members caring for you clean their hands with soap and water or an alcohol based gel before and after caring for you.
- Make sure you don’t get the site or dressing wet when taking a shower or bath.
- Don’t touch the site, dressing, or tubing more than you need to.
- Don’t let family members or visitors touch the site, dressing, or tubing.

These easy rules will help keep you and your veins stay safe and healthy.

What problems can happen with my vascular access device?

You will be monitored for any signs of complications, and in the majority of cases, if a problem is detected it can be successfully treated.
It is important to know that there are risks involved in having a vascular access device. Listed below is a list of potential complications and how to prevent them. It is important to tell the Health Care Professionals that are looking after you if you have any concerns.

**It is also important to challenge them if you think they are not taking care of your vascular access device the way they should be.**

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<thead>
<tr>
<th>ISSUE</th>
<th>WHAT THIS MEANS</th>
<th>HOW TO PREVENT IT</th>
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<tbody>
<tr>
<td>Infection</td>
<td>Site infection happens when germs get into the skin at the insertion site.</td>
<td>Site infection is prevented by making sure that the dressing is clean, dry (underneath and on top), and is not loose. Your Health Care Professional will take the old dressing off, clean the site, and place new dressing at least once a week. It is important to not submerge your vascular access device into water and should be covered whilst showering to prevent it from getting wet.</td>
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<td></td>
<td>Let your healthcare team know if:</td>
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<td></td>
<td>■ There is pain or soreness at the insertion site</td>
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<td></td>
<td>■ There is swelling at the insertion site</td>
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<td></td>
<td>■ The insertion site looks red.</td>
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<td></td>
<td>■ The skin at the insertion site feels warm</td>
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<td></td>
<td>■ There is any leaking at the insertion site</td>
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<td></td>
<td>■ If you feel hot and/or have a temperature above 38°C or 100.4° F</td>
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<tr>
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<td>Infection</td>
<td>Central Line Associated Bloodstream Infection (CLABSI, pronounced clab-see)</td>
<td>The risk of this very serious problem is minimized by making sure that you and the Health Care Professionals are very careful and keep germs from getting into or on the line. If you do develop a bloodstream infection, it can often be treated successfully with antibiotics. The catheter may be removed if you develop an infection.</td>
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<td>Phlebitis</td>
<td>A swollen, sore or injured vein: the vein where the vascular access device is put in may look red and be warm to touch.</td>
<td>The vein may be too small for the strength of the treatment The best way to keep it from happening is to choose the right device for your treatment. It can also happen because the vascular access device is too big for the vein or damaged the vein is damaged from insertion or whilst in place.</td>
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<td>Thrombosis or thrombus</td>
<td>A blood clot in a vein that can slow or stop the blood flow in the vein.</td>
<td>A blood clot can be caused by many things – damage to your veins from strong medicines and solutions, a vascular access device that is too big for the vein, and the underlying condition you may have.</td>
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<td>Blocked line</td>
<td>A blood clot, either at the end or inside the vascular access device, or a pinch in the line.</td>
<td>A Health Care Professional will access your device at regular intervals to make sure it is working correctly.</td>
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<td>Line migration</td>
<td>This is when the vascular access device can move in and out from the entry site</td>
<td>It is advised to wear loose fitting clothes to stop your device getting caught. Repetitive movements can make your device move. Speak to your Health Care Practitioner if you have a specific job or hobby that requires a lot of repetitive movement</td>
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What are we doing at NBT to prevent infections

To prevent Vascular Access Device-associated bloodstream infections your Health Care Professional will:

- Choose a vein where the Vascular Access Device can be safely inserted and where the risk for infection is small.

- Clean their hands with soap and water or an alcohol-based hand gel before inserting the Vascular Access Device and caring for you and your Vascular Access Device once it’s in.

- For central Vascular Access Device insertions the inserter will wear a mask, hat, sterile gown, and sterile gloves to keep it sterile. You will be covered with a sterile sheet.

- Clean your skin with an antiseptic solution before putting in the Vascular Access Device.

- Clean their hands, wear gloves, and clean the Vascular Access Device with an antiseptic wipe before using the it.

- Decide every day if you still need to have the Vascular Access Device in. The Vascular Access Device will be removed as soon as it is no longer needed.

- Carefully handle medications and fluids that are given through the Vascular Access Device.
1. Ask any questions you may have about vascular access. While you are in the hospital watch how they care for your Vascular Access Device so you can learn the best care to prevent problems.

2. Wash hands and put on gloves before touching the Vascular Access Device to give medicines or solutions, and before taking a blood sample, flushing the Vascular Access Device or changing the dressing.

3. Before attaching a syringe or tubes to the Vascular Access Device they will clean it carefully by wiping it with an antiseptic wipe for 30 seconds and allow it to dry.

4. They will always check to make sure the Vascular Access Device is not blocked by flushing before using them to give medications, IV solutions, or drawing blood. They will also make sure that they can see blood come back into the extension tube before flushing. If a Vascular Access Device is blocked a special solution may be used to unblock it.

5. If the dressing is loose at its edges, dirty, or wet they will take it off and put a new dressing on. Remember, the dressing helps keep the Vascular Access Device from moving and protects it from germs.

6. When a central Vascular Access Device dressing is taken off, sterile gloves and apron are worn while the site is cleaned and the new dressing is applied using sterile technique.

7. If a Needle Free Device (NFD) or tubing becomes loose or comes off there may be leaking of blood or solution from the Vascular Access Device. Tell a Health Care Professional right away, they will clean the hub and put a new tubing or Needle Free Device (NFD).

8. If the CVC is pulled out by accident, make sure you tell
your nurse, even if it only comes out “a little bit.” It should be never pushed back in.

9. Scissors should never be used to take off dressings and tape due to the risk of damaging the line or device.

Taking care of your Vascular Access Device at home

- Make sure you understand how to care for the Vascular Access Device before leaving the hospital.
- Make sure you have an IV Passport as a point of reference for you and/or the community team looking out for you.
- Watch for signs and symptoms of infections.

You or a family member may care for the Vascular Access Device if you need medicines and IV solutions when you go home.

You may have a visiting nurse to help you care for you and your Vascular Access Device at home, or you may visit your GP practice.

All devices will be removed by the Vascular Access Service as an outpatient.

Please contact the Vascular Access Service on: 0751 493 0223 or the ward you were discharged from if you have any concerns.
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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